



# Los Alamos National Laboratory

## Energy and Environmental Analysis Group

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*TSA-4 provides independent and unbiased scientific, engineering, and economic assessments to energy and environmental decision makers in the U.S. and the world.*

### Energy Assessment



### Environmental Modeling



### Environmental Assessment



### Economic Modeling



### International Activities

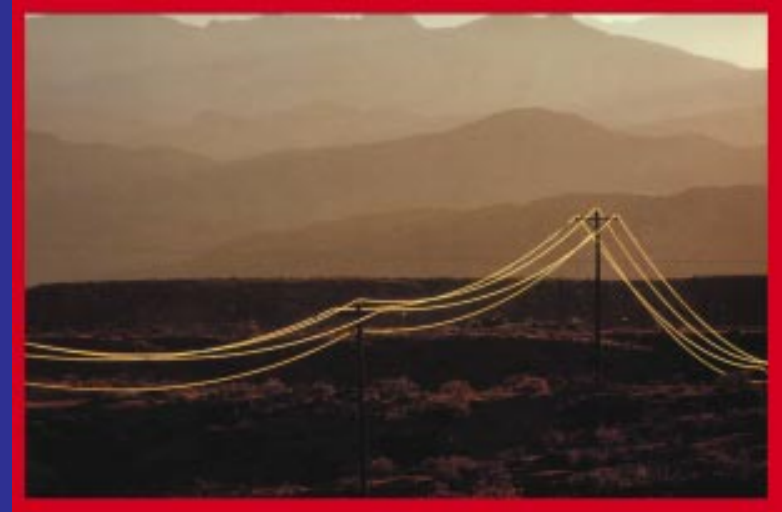
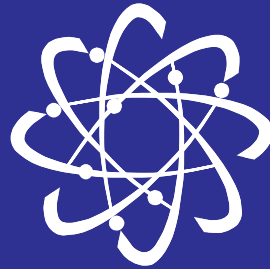




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## **Energy Assessment**

- **Support to DOE office of isotope production**



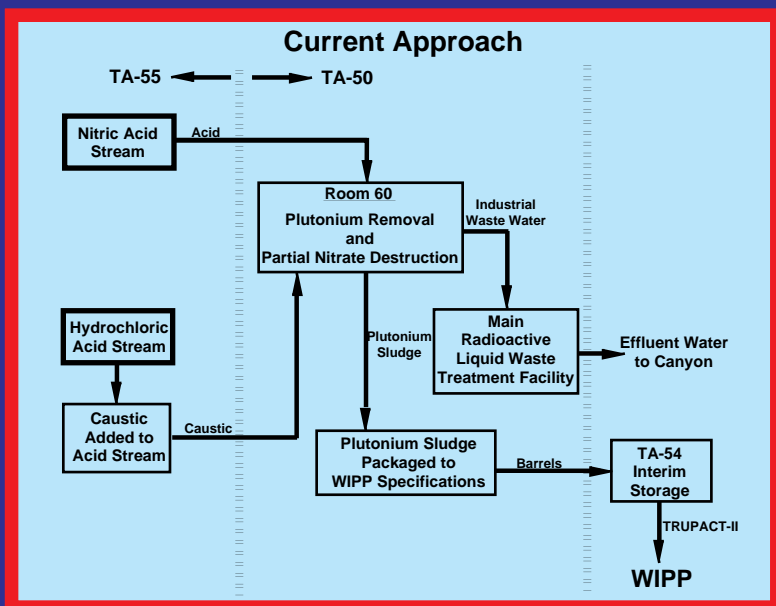
- **Analysis of electricity cost for accelerated production of tritium**
- **Analysis of greenhouse gas emissions from electrical generation plants**



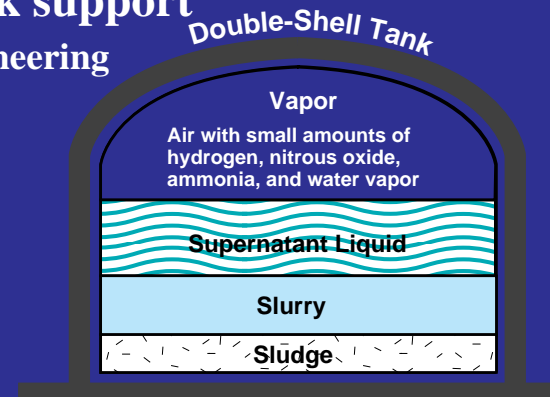
# Environmental Assessment

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- Environmental Technology Cost-Savings Analysis project
- Laboratory EM support



- Hanford tank support  
Systems engineering  
Privatization



Source: "Hanford Tank Clean Up: A Guide to Understanding the Technical Issues," Pacific Northwest Laboratory report PNL-10773. (Pictures not to scale)



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## Economic Modeling

- National Economic System Simulation

- Money flow modeling
  - Cash flow analysis to detect illicit financial transactions
  - International wire transfer analysis



- Impact studies

DOE facilities on New Mexico  
LANL on northern New Mexico







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# Environmental Modeling

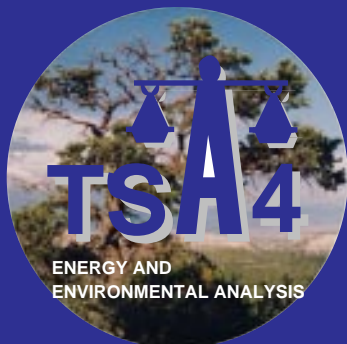
- **Strategic evaluation**

- Objective analysis
  - Subjective analysis



- **Air quality model development and applications**

- Meteorological models
  - Dispersion models
  - Atmospheric chemistry models



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## International Activities



- **Support to LANL sister laboratory agreements**
  - Peru (IPEN)
  - Egypt (EAEA)
  - Mexico (ININ)

- **Air quality programs**
  - Mexico City
  - Juarez/El Paso
  - Chile smelters

- **Energy programs**
  - Central American and Caribbean energy assessments
  - Energy situation in Fiji, Papua New Guinea, and Vanuatu
  - China energy
  - Mexico coal